

Development of Retail Sales Indexes

By Edward L. Lloyd, Chief, Market Data Section, Marketing Research and Service Division

IN 1933 the Bureau of Foreign and Domestic Commerce undertook the development of a comprehensive set of indexes to measure the flow of retail sales. The first step in the Bureau's program consisted of an evaluation of existing data to determine the extent of the coverage, and to make plans for filling the gaps in a manner which would present an adequate measure of the total flow.

Initial Indexes Prepared.

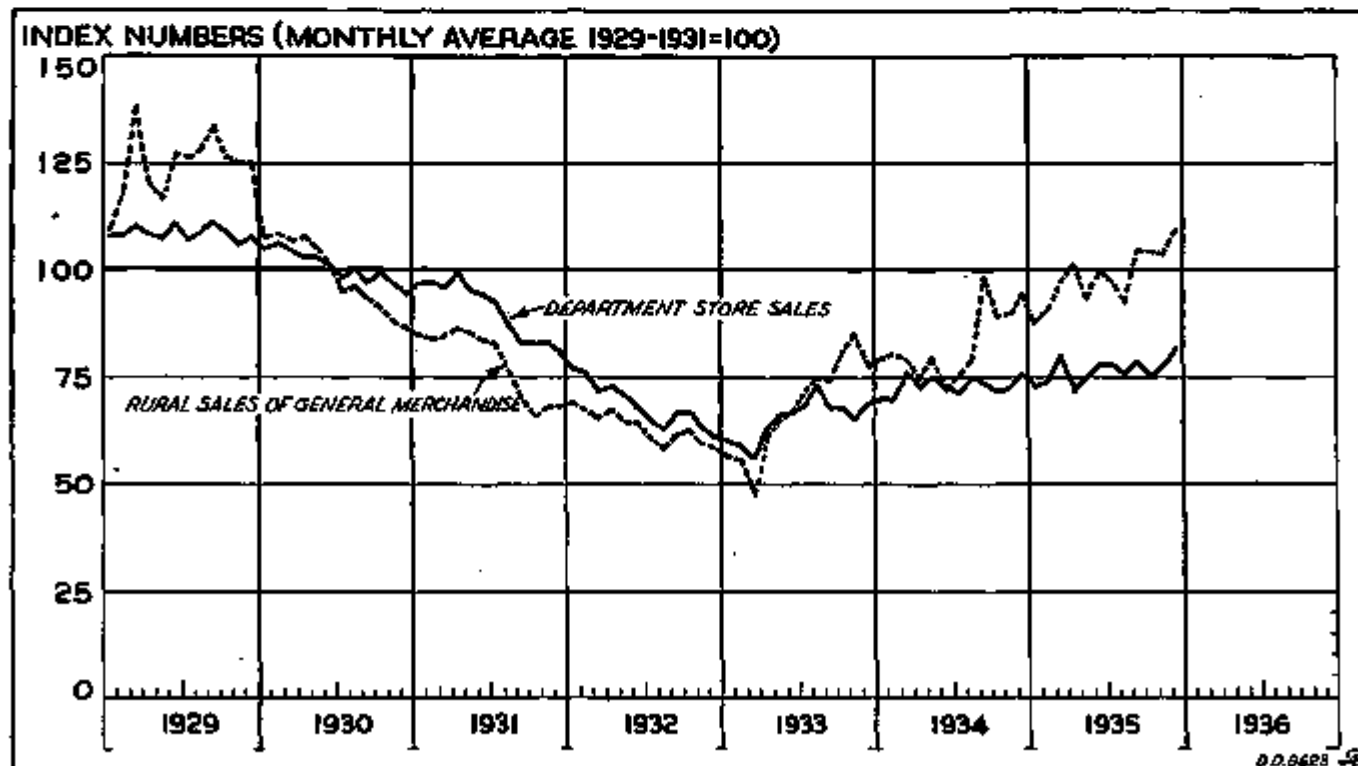
After careful investigation, it was decided to cover first the chain-store and mail-order field, the sales of new passenger automobiles, and later to endeavor to cover the rest of the merchandise field through reports from independent stores. In view of the magnitude of the latter task, it was decided to do this on a State basis, utilizing the facilities of cooperating local agencies wherever possible.

Toward the close of 1933, the collection of sales figures from chain grocery stores, limited-price variety stores, and from the automobile manufacturers was inaugurated. The first monthly releases showing the percentage change in the dollar volume of sales of chain grocery, variety stores, and new passenger automobiles were issued in September 1933. In February 1934 figures were made public on the dollar volume of

sales of general merchandise in rural areas, based on reports from cooperating mail-order concerns and a leading chain organization with stores located principally in rural regions. The following July the first monthly release on rural sales, distributed by regions, was made.

Of the above-named series, those relating to variety stores, new passenger automobiles, and rural sales of general merchandise have been placed on an index basis with the 1929-31 monthly average as a base. Comparable monthly data, with and without adjustment for seasonal variation, were computed back to January 1929. Detailed descriptions of each of these series may be found in the order named in the March, April, and December 1934 issues of the Survey of Current Business. Current figures are presented in the regular monthly issues of the survey.

Regular monthly reports of the relative changes in chain grocery-store sales and rural sales of general merchandise, by regions, have been issued, but since it was not possible to secure sufficient historical data for use in constructing indexes, the preparation of the data in such form was delayed. Sufficient data have been accumulated so that the work of computing index numbers is now in progress.



Comparative Trend of Rural General Merchandise Sales and Department Store Sales, Adjusted for Seasonal Variation.

Coverage of Existing Indexes.

This initial start, together with the department-store sales index computed by the Board of Governors of the Federal Reserve System, gave a coverage of about 30 percent of the retail store groups comprising about two-thirds of the total volume of retail sales in 1933. However, in some of these groups the coverage was far from adequate. The accompanying table presents certain data abstracted from the Census of American Business of 1933, together with significant ratios which will aid in interpreting the monthly data now available.

The chain-grocery sample covers about 70 percent of the total chain-grocery sales and hence is probably representative of this class. Such stores, however, handle only 44 percent of the total sales through grocery and combination grocery-and-meat stores, and only about one-third of the total sales in the food group.

The rural general-merchandise, department-store, and variety-store sales afford a representative coverage of the general-merchandise group which in 1933 comprised 15 percent of the total retail sales. The automobile index, which differs from all the others in that it represents a complete coverage of new passenger-car sales, rather than a sample, is naturally indicative of the trend of such sales. While the index may give some indication of the general trend in the remainder of this group, the changes in the sales of accessory dealers, filling stations, and garages are not necessarily the same as for new passenger-car sales. A sizable, but as yet unmeasured, factor in this field is that of used-car accumulation and sales. In 1933, sales of motor-vehicle dealers represented 48 percent of the total sales of the automotive group. New passenger vehicles accounted for about half of the total volume of sales of motor-vehicle dealers.

The index of sales of limited-price variety stores represents a comprehensive coverage of this field, since over 90 percent of the volume is sold through chain organizations. The Bureau's index is based upon comparative sales figures furnished by companies operating more than 75 percent of the total chain units, and accounting for more than 85 percent of the volume of sales.

The rural retail sales data are based upon sales of a large chain organization operating in small towns and rural areas, and on sales by mail only of three large mail-order houses. These figures represent a broad range of goods sold in such areas, with the major exception of groceries. The Bureau's sample covers about 20 percent of the total estimated sales of the type covered. The department-store sales index of the Federal Reserve System covers more than half of the total sales through these stores.

Additional Chain-Store Data Now Collected.

While the index series now available and the reports showing percentage changes for other groups of retailers are of considerable value, much remains to be accomplished before a comprehensive index of retail sales can be established. Nevertheless, the data

described in the foregoing cover not only the most important lines of trade but are the sources from which information may be gathered promptly each month. They permit the coverage of a large sample of the trade with a minimum number of reporters. Recognizing that the trends in other lines of trade may be quite different, the Bureau is supplementing those established reports by data gathered from (1) other chain organizations and (2) a representative cross section of independent stores in a number of leading States.

Supplementary reports on the chain-store field were issued for the first time in the latter part of 1935. The first was made public in October and gave the percentage changes in sales of chain drug stores for August 1935 in comparison with the preceding month and the same month of 1934. This series, in addition to presenting the total net sales, provides comparative data on tobacco sales, fountain sales, and all other sales. The present coverage of the sample is about 54 percent of all units. An accurate estimate as to the dollar volume coverage cannot be made at this time.

In October 1935, preliminary figures showing the percentage change in chain shoe-store sales in August as compared with August 1934 and with July 1935 were sent to cooperating firms. This sample is to be built up gradually and will eventually cover a large percentage of the shoes sold through chain stores. The sales figures show separately men's women's, and children's shoes sold in various price ranges. At the present time the sample covers something over 50 percent of all shoe chain units which are operated in the United States. An analysis of the figures indicates that these stores handle a similar percentage of the total volume of sales. Data are also being collected on sales of men's wear by chain stores, but, as in the case of shoes, the sample has not yet been built up to a size which will permit the issuance of a report. Work on other chain-store series is also under way.

State Reports Fill Important Gap.

The independent store presented a major problem in rounding out the sample data. In view of the magnitude of the task it was deferred until such time as other more readily obtainable material had been secured and, where possible, put in index number form. An exception was the report on retail sales, by kinds of business, for the State of Massachusetts, which has been issued by the Bureau since early in 1934. This report was initiated by the Federal Reserve Bank of Boston in cooperation with the Massachusetts State Recovery Board, but early in 1934 the Bureau of Foreign and Domestic Commerce took over the task of cooperating with the Federal Reserve Bank of Boston in compiling this report. It currently covers sales of over 900 stores, distributed in accordance with the group classifications of the Census of American Business, 1933.

The Massachusetts figures were followed very closely as a test to see what might be undertaken in other areas. The first step in initiating a national program similar to that conducted in Massachusetts for reporting sales of independent stores was to secure a basic list of firms. The original list of firms to be contacted was based upon reports to the Census of American Business in 1933. Some 110,000 firms throughout the United States were selected. The selection in each line was made for the purpose of securing the greatest volume of trade from the smallest number of firms. This program embraced the solicitation of stores with sales above a specific volume, the size of the latter varying according to the kind of business and location.

Of this list, more than 10,000 were in the States of Illinois, Indiana, and Wisconsin. The firms in these States were approached by mail from the Chicago district office of the Bureau, which has to date received about 3,000 agreements to cooperate.

The first releases covering the States of Illinois, Indiana, and Wisconsin were issued in September 1935 and covered sales for the month of August. The initial reports covered 1,250 stores and this was increased to more than 1,800 in the December report.

Subsequently, in cooperation with the Bureau of Business Research, University of Texas, the program was expanded to include the States of Texas, Oklahoma, and New Mexico. The first release on these States covered the month of October 1935.

The State reports are designed to present the sales trends for the 21 most important kinds of independent retail business. These were selected on the basis of their importance in relation to the total volume of retail sales, or as a reflection of specific types of expenditures.

The State reports on retail sales, in addition to showing percentage changes for the current month over the preceding month and the corresponding month a year ago, also show the total dollar sales of reporting firms for each of these periods and the number of firms showing an increase, decrease, or less than 1 percent change.

Eventually, it is hoped that these series may be extended to cover all States. At present, an effort is being made to build up a representative sample of reporting stores in the States of Colorado and Wyoming in cooperation with the Bureau of Business and Social Research of the University of Denver. A similar plan is being worked out in cooperation with Ohio State University to institute the program in the State of Ohio.

Thus, the completion of this program would mean that the State reports, plus the chain-store reports and the data of the Board of Governors of the Federal Reserve System, would provide a comprehensive coverage of the retail-sales field, both as to type of sales and also as to geographic distribution of sales.

These reports will all be on a dollar basis, and so will not necessarily reflect the changes in the physical volume of goods sold through retail stores. Nevertheless, the knowledge afforded concerning the movements of the dollar value of sales and the distribution by types of stores should be of great significance.

The cooperation of reporting organizations, and others aiding in the gathering of basic data, which has made possible the progress achieved to date is gratefully acknowledged by the Bureau. The same kind of cooperation from the remainder of the retail field will facilitate the completion of the task with benefit to participating agencies, as well as to all those who are interested in economic analysis.

Retail Sales 1933,¹ Census of American Business

Kind of business	Total sales 1933	Percentage of United States		Percentage of major group	Percentage of minor group
		Total	Chain or independent		
United States total.....	Thousand dollars				
Chain.....	24,337,228	100.0			
Independent.....	6,812,789	28.2	100.0		
Food.....	17,824,662	73.2	100.0		
Grocery (with and without meat).....	6,792,010	27.1		100.0	
Chain.....	5,004,284	20.9		73.7	100.0
Independent.....	2,208,000	9.0	25.0	22.8	45.1
All other.....	2,776,918	11.4	14.8	40.9	54.8
Farmer supplies and country, general.....	1,788,730	7.1		20.3	
General merchandise.....	1,500,781	6.2		100.0	
Chain.....	3,801,223	15.6		100.0	
Department stores.....	2,544,898	10.5		85.4	100.0
Chain.....	605,723	2.5	9.6	15.5	22.8
Independent.....	1,708,445	7.0	9.5	43.9	67.1
General merchandise and dry goods.....	608,145	2.5		17.3	100.0
Chain.....	478,107	1.9		17.4	100.0
Independent.....	618,939	2.6	9.8	14.0	91.1
Variety, 5-cent-10 to 25-cent.....	95,000	.4	.3	1.4	3.3
Apparel.....	2,928,233	12.0		100.0	
Men's and boys' clothing.....	480,104	2.0		26.4	100.0
Chain.....	107,583	.4	1.7	6.6	22.0
Independent.....	374,266	1.6	2.1	19.8	78.5
Women's ready-to-wear and sportswear.....	588,292	2.5		22.8	100.0
Chain.....	134,285	.6	.8	7.0	23.5
Independent.....	454,482	1.9	5.8	22.3	75.3
Shoe stores.....	424,502	1.7		22.1	100.0
Chain.....	106,249	.4	3.1	18.2	48.2
Independent.....	107,348	.4	1.1	10.3	48.5
All other.....	411,245	1.7		22.0	100.0
Automotive.....	4,419,249	17.7		100.0	
Motor-vehicle dealers.....	2,127,730	8.8		48.1	100.0
Chain.....	112,783	.5	1.6	2.5	5.3
Independent.....	2,015,447	8.3	1.3	45.5	94.6
Filling stations.....	1,591,724	6.5		34.7	100.0
Chain.....	542,832	2.2	5.8	12.3	35.5
Independent.....	854,867	3.5	5.5	22.3	84.3
All other.....	794,025	3.2		17.3	100.0
Furniture and household appliances.....	688,730	2.8		100.0	
Furniture and household-appliance stores.....	742,185	3.0		78.5	100.0
Chain.....	121,087	.5	1.6	12.6	10.1
Independent.....	621,218	2.6	2.0	55.7	71.0
All other.....	204,815	.8		21.5	100.0
Lumber building and hardware.....	1,342,706	5.4		100.0	
Hardware and farm implements.....	488,458	2.0		26.4	100.0
Chain.....	10,844	.0	.3	1.6	4.1
Independent.....	407,167	1.7	2.6	34.8	95.8
All other.....	804,219	3.4		43.6	100.0
Restaurant and eating places.....	1,420,625	5.7		100.0	
Chain.....	136,800	.6	3.1	13.8	
Independent.....	1,122,822	4.6	6.3	78.5	
Other retail stores.....	2,012,833	8.3		100.0	
Drug.....	1,086,223	4.3		40.8	100.0
Chain.....	267,298	1.1	4.2	10.2	25.0
Independent.....	798,509	3.3	4.4	30.2	74.0
All other.....	1,546,809	6.3		60.2	100.0
Second-hand stores.....	105,376	.4		100.0	

¹ Percentages other than for major groups, with a few exceptions, do not add to 100 since figures include types of selling other than independent and chain stores, which are not shown separately here and since the chain and independent breakdown is not shown for the "all other" groups appearing in this table.